INDEX TO VOLUME XXXVIII

[NOTE.—In this index the title of principal papers and headings of departments, as *Discussions* are in italics.]

Abstracts—

Alkali sulphide theory of gold deposition (Smith), 561
Asbestos in the military program (Bowles), 169
Bravoite from a new locality (Rasor), 399
Brucite in limestone near Wilkinson, Ontario (Brown), 408
Chemical lime in central Pennsylvania (Kay), 188
Colloform sulphide veins of Port au Port Peninsula, Newfoundland (Watson), 621
Composition of some chromites of the Western Hemisphere (Stevens), 85
Diamonds in the northeastern Bolivian Andes (Oppenheim), 658
Dip and strike from three not parallel drill cores lacking key beds (stereographic method) (Bucher), 648
Effect of chemical impurities on scheelite fluorescence (Greenwood), 56
Fe-Ni-S system (Hawley, Colgrove, Zurbrigg), 335
Fluorspar deposits of St. Lawrence, Newfoundland (Van Alstine), 80
Geologic principles in the search for chromite ores (Peoples, *et al.*), 81
Geology of some nickel-silicate deposits (Pecora), 82
Geology of the Red Rose tungsten mine, northern British Columbia (Stevenson), 80
Gold ores of the Little Long Lac area, Ontario (Armstrong), 204
Gravimeter survey for chromite in Cuba (Cumings and Fraser), 84
Layered or banded chromite at Campo Formoso, Baia, Brazil (Johnston and de Souza), 287
Lithium and strontium in the war program (Harness), 170

Abstracts—Continued

Manganese deposits of the Turtle Mountains, North Dakota (Hendricks and Laird), 591
Manganese oxide minerals (Fleischer and Richmond), 269
Mechanism and environment of gold deposition in veins (White), 512
Mica deposits of Georgia (Peyton), 169
Mica-bearing pegmatites of North Carolina (Keppel), 86
Mineralization of the Middle Butte district, California (Fraser, *et al.*), 83
Mineralogy of the manganese oxides (Fleischer and Richmond), 85
Nature and significance of certain variations in composition of Los Angeles basin ground waters (Morse), 475
Nickel deposit near Dracut, Massachusetts (Dennen), 25
Notes on the early history of water-well drilling in the United States (Carlston), 119
On the presence of boron in braunite and manganese ores (Wasserstein), 389
Origin of some chromiferous sands along the southwestern Oregon coast (Griggs and Wells), 83
Paragenesis of the ore of the Normetal mine, Abitibi County, Quebec (Putman), 313
Pyrometasomatic deposits at Iron Mountain, New Mexico, and their bearing on exploration for beryllium ores (Jahns), 82
Quartz veins in the Ouachita Mountains of Arkansas and Oklahoma (their relations to structure, metamorphism, and metalliferous deposits) (Miser), 91
Rare element prospecting in pegmatites (Quirke and Kremers), 173

Abstracts—Continued
Results of exploration for iron ore in far Western States (Burchard), 85
Resumé of pre-war efforts to stockpile (Elliott), 168
Structural and mineralogical features of beryl pegmatites (Page, *et al.*), 86
Structural determinations from diamond drilling (Mertie), 298
Summary and results of work on graphite deposits of the United States (Currier), 84
Summary of results of geologic exploration for fluorspar (Williams), 87
Summary of South America's sources of mineral supply (Wright), 88
Supergene magnetite (Brown), 137
Tungsten deposits of southern Kiangsi, China (Hsu), 431
Tungsten deposits of the Darwin Hills, Inyo County, California (Wilson), 543
Tungsten mining in Argentina (Singewald), 87
Use of Geiger-Mueller counter in the search for pitchblende-bearing veins at Great Bear Lake, Canada (Ridland), 88
Vanadiferous shale in the Phosphoria formation, Wyoming and Idaho (Rubey), 87
War minerals in Newfoundland (Snelgrove and Howse), 81
Aerial photographs (review), 678
Agar, W. M., on pyrrhotite, 346
Ahlfeld, F., and Muñoz Reyes, J., on diamonds, 658
Aitken, A. C., on determinants, 312
Alabama, water-well drilling history, 130
Alkali sulphide theory of gold deposition (Smith), 561
Allanite, 177
Allen, E. T., and Crenshaw, J. L., on cinnabar, 152
on zinc, 633
with Johnston, J., on sulphides, 645
et al., on pyrrhotite series, 339
Allen's reaction, 571, 577
Alsen, N., on sulphur, 343
Alteration, Little Long Lac area, Ont., 250
tin-tungsten veins, Kiangsi, 450, 456, 459
America at war (review), 257
Analyses, waters, Los Angeles basin Calif., 485
Anderson, E. M., review of book by, 423
Andes, Diamonds in the northeastern Bolivian (Oppenheim), 658
Antony, U., and Lucchesi, A., on gold, 568
Apatite, 38, 176
Appalachian Valley (review), 255
Argentina, tungsten (abstract), 87
Arizona, iron, prospecting (abstract), 86
Arkansas and Oklahoma (their relations to structure, metamorphism, and metalliferous deposits), Quartz veins in the Ouachita Mountains of (Miser), 91
Arkose, Little Long Lac area, Ont., 241
Armstrong, E., communication by, 533
Armstrong, H. S., *Gold ores of the Little Long Lac area, Ontario,* 204–252
Arnold, D., and Arnold, R., on San Pedro series, Calif., 477
Arsenopyrite, 214, 237, 461
Asbestos and war needs (review), 169
Atwood, W., U. S. coastline (review), 258
Auger, P. E., on gold, 247
Augite, 37
Australia, galena and marmatite leaching, Broken Hill, 253

Babcock, E. J., on lignite, 593
Ball, S. H., memorial by, 264
Banded chromite at Campo Formoso, Baia, Brazil, Layered or (Johnston and de Souza), 287
Banding, sulphide veins, Newfoundland, 626
Bandy, M. C., on arsenopyrite, 250
on solutions, 533
Barbosa, O., and Lacourt, F., on chromite, 287
Barite, 553
Barlow, A. E., on pyrrhotite, 340
Bartley, M. W., with Roberts, H. M., *Hydrothermal replacement in deep seated iron ore deposits of the Lake Superior region,* 1–24
Bastin, E. S., and Behre, C. H., Jr., on lead and zinc, 117
Bateman, A. M., on magmas, 54
on scheelite, 555
review of book by, 154
Bates, B., review by, 329
Bayley, W. S., memorial of, 263

Becker, G. F., on alkali sulphides, 149
on sulphides, 564
Bedding, determination of attitude, 300
Beds, Dip and strike from three not parallel drill cores lacking key (stereographic method) (Bucher), 648
Behre, C. H., Jr., discussion by, 65
on colloform ores, 641
on sphalerite, 631
et al., on lead-zinc ores, 65
with Scott, E. R., and Banfield, A. F., on sphalerite, 631
Bell, R., on pyrrhotite, 341
Benedicks, —., on iron-nickel system, 353
Bengston, N. A., and Van Royen, W., review of book by, 330
Bentonite, Pennsylvania, 200
Bernewitz, M. W. von, and Chellson, H. C., review of book by, 259
Beryl, 462
pegmatite deposits (abstract), 86
Beryllium, New Mexico, Iron Mtn. (abstract), 82
Bibliography, gold deposition, 589
ground water, Los Angeles basin, Calif., 511
iron, replacement, Lake Superior region, 23
nickel deposit, Dracut, Mass., 54
replacement in iron ores, Lake Superior region, 23
Billings, M. P., review of book by, 326
Billingsley, P., and Locke, A., on folds, 546
Biotite, 39, 456
Bismuth, 452, 553
Bismuthinite, 553
Bleb, 211
Bloxam, W. P., on hydrosulphides, 151
Bolivian Andes, Diamonds in the northeastern (Oppenheim), 658
Books received, 73, 164, 260, 331, 427, 539, 612, 678
Bornemann, —., on iron-nickel system, 353
Boron in braunite and manganese ores, On the presence of (Wasserstein), 389
Bowles, O., abstract by, 169
Bowman, I., on wells, 135
Bragg, W. L., on lithium, 183
Branner, G. C., on igneous rocks, 111, 114
on sandstone, 106
Brant, A., on iron formations, 208
Brauner, B., on calaverite, 575
Braunite, 273
Braunite and manganese ores, On the presence of boron in (Wasserstein), 389
Bravoite from a new locality (Rasor), 399
Bray, J. M., on chemical elements, 185
Brazil, Layered or banded chromite at Campo Formoso, Baia (Johnston and de Souza), 287
geology (review), 675
Breccias, fault breccia, 424
British Columbia, tungsten, Red Rose mine (abstract), 80
Brown, I. C., *Brucite in limestone near Wilkinson, Ontario*, 408–419
Brown, J. S., *Supergene magnetite*, 137–148
discussion by, 325
discussion of paper by, 608
Bruce, E. L., on Little Long Lac area, Ont., 205
and Samuel, W., on Little Long Lac mine, Ont., 226
Brucite in limestone near Wilkinson, Ontario (Brown), 408
Bryan, K., on quartz, 102
Bucher, W. H., *Dip and strike from three not parallel drill cores lacking key beds (stereographic method)*, 648–657
on projections, 649
Buddington, A. F., on nickel, 28
Buehler, H. A., on nickel, 400
Buerger, M. J., on galena, 644
Burchard, E. F., abstract by, 85
Butler, B. S., on limestone, 6
et al., on sulphides, 583
Butts, C., review of books by, 255
and Moore, E. S., on Bellefonte area, Pa., 188

Cady, R. C., memorial of, 265
Calaverite, 574
Calcareous tufa, Turtle Mtns., N. Dak., 595
Calcite, 97, 215, 626, 641, 664
staining tests (discussion), 420
California, Tungsten deposits of the Darwin Hills, Inyo County (Wilson), 543
ground water, Los Angeles region, 475
iron, prospecting (abstract), 86
Middle Butte district (abstract), 83
Calkins, F. C., discussion by, 608
Callaghan, E., on brucite, 408
Campbell, W., and Knight, C. W., on pyrrhotite, 346

Campo Formoso, Baia, Brazil, Layered or banded chromite at (Johnston and de Souza), 287
Canada, iron, Ontario, Steep Rock Lake, 2
Carlston, C. W., *Notes on the early history of water-well drilling in the United States*, 119–136
Carolina Bays (review), 426
Cassiterite, 449, 460
Cataclasis, 517
Cayeux, L., on magnetite, 138
Cesium, 182
Chalcopyrite, 42, 44, 215, 230, 237, 240, 314, 634
Chambers, G. H., on manganese, 286
Chemical analyses, boron in braunite, 390
chromite, Campo Formoso, Brazil, 294
gas, Sulphur Bank, Calif., 151
limestone, Ontario, 409
Pennsylvania, 201
magnetite, U. S. S. R., 141
manganese, North Dakota, 599
ores, iron, Lake Superior, 3
pentlandite, 342
scheelite impurities, 61
water, Broken Hill, Australia, 253
Chemical composition, iron, Steep Rock Lake, Ont., 665
Chemical impurities on scheelite fluorescence, Effect of (Greenwood), 56
Chemical lime in central Pennsylvania (Kay), 188
China, Tungsten deposits of southern Kiangsi (Hsu), 431
Chlorite, 316, 413, 462
Christy, —., on alkali sulphides, 149
Chromite, chemical composition (abstract), 85
Cuba, gravity survey (abstract), 84
Oregon, sand deposits (abstract), 83
prospecting (abstract), 81
Chromite at Campo Formoso, Baia, Brazil, Layered or banded (Johnston and de Souza), 287
Cinnabar, 152, 565
Clarke, F. W., on calcium, 67
Clements, —., *et al.*, on iron, 17
Coal (review), 154
metamorphism, Ark.-Okla., 107
miners, pulmonary disease (review), 676
Coats, R. R., on banding, 297
Cobalt, Missouri, Mine La Motte, 399
Cockfield, W. E., and Walker, J. F., on pentlandite, 347
Colgrove, G. L., with Hawley, J. E., and Zurbrigg, H. F., *The Fe-Ni-S system*, 335–388
Collins, W. H., *et al.*, on replacement, 9
Colloform sulphide veins of Port au Port Peninsula, Newfoundland (Watson), 621
Colloids, occurrence criteria, 644
Colorado, fluorspar, prospecting (abstract), 87
Columbium, 178
Commodity Year Book (review), 330
Composition of Los Angeles basin ground waters, The nature and significance of certain variations in (Morse), 475
Concretions, ironstone concretions, N. Dak., 598
Cooke, H. C., *et al.*, on Rouyn region, Quebec, 313
Copper, Lake Superior district (review), 611
Coronadite, 273
Coulsonite, 180
Craig, L. C., on limestone, 191
Croneis, C., and Billings, M., on volcanic necks, 111
Cryptomelane, 270, 273
Crystallization order of minerals, 174
Cuba, gravity survey, Camaguey district (abstract), 84
Cumings, W. L., and Fraser, D. M., abstract by, 84
Cummings, W. L., and Miller, B. L., on magnetite, 142
Cuprite, 634
Currier, L. W., abstract by, 84

Daly, R. A., review of book by, 162
Dana, E. S., on gold, 572
Dana, J. D., on pentlandite, 342
Daubree's reaction, 459
Day, A. L., and Allen, E. T., on solutions, 563
Deferments for geologists (discussion), 667
de Mello, J. L., Jr., on chromite, 287
Dennen, W. H., *A nickel deposit near Dracut, Massachusetts*, 25–55
Deposition, The alkali sulphide theory of gold (Smith), 561
Deposition in veins, The mechanism and environment of gold (White), 512
Derby, E. L., Jr., on iron, 21
de Rohden, C., on scheelite, 59

de Souza, H. C. A., with Johnston, W. D., Jr., *Layered or banded chromite at Campo Formoso, Baia, Brazil*, 287–297
Diagrams—
acid ratios in water, California, 482
chromite and olivine deposition, 296
iron deposit, Steep Rock Lake, Ont., 7
mineral collection methods, 606
paragenesis, sulphides, Spider Pond, Newfoundland, 640
scheelite impurities and fluorescent colors, 62
stereographic projections, 650
system $(Fe, Mg)O \cdot (Fe, Al, Cr)_2O_3$, 295
system Fe-Ni-S, 351
vein, Goodyear prospect, Newfoundland, 625
Kiangsi, China, 443
well-drilling rigs, 124
Diamond drilling, Structural determinations from (Mertie), 298
Diamonds, Hot Spring, Ark. diamonds, 92
Diamonds in the northeastern Bolivian Andes (Oppenheim), 658
Dickite, 97
Dickson, C. W., on pyrrhotite, 341
Digman, R. E., books received by, 164, 260, 331, 427, 539, 612, 678
reviews by, 259, 425, 426, 536, 610, 611, 677, 678
Dikes, Dracut area, Mass., 33
Kiangsi, China, 460
Little Long Lac area, Ont., 209, 232
Ouachita Mtns., Ark.-Okla., 113
Port au Port Peninsula, Newfoundland, 646
United Kingdom (review), 423
Dip and strike from three not parallel drill cores lacking key beds (stereographic method) (Bucher), 648
Disbrow, L., on well drilling, 123
and Sullivan, J. L., on well drilling, 124
Discussions by—
Calcite-dolomite staining tests (Brown), Smith, 420
Ground water and hydrothermal deposits (Behre and Garrels), 65
Hydrothermal replacement in deep seated iron ore deposits of the Lake Superior region (Roberts and Bartley), Quirke, 662
Laboratory evidence concerning the interpretation of asymmetrical crystals (Armstrong), 533
Discussions by—Continued
Method for collecting oriented mineral specimens (Morgan), 603
New aid in handling personnel problems in geology, Longwell, 667
Post-mine leaching of galena and marmatite at Broken Hill (Garretty and Blanchard), Stillwell and Edwards, 253
Some concepts on the geology of quicksilver deposits in the United States (Ross), Pollock, 149
Suggested use of the word microfacies (Brown), 325
The word "microfacies" (Brown), Calkins, 608
Work of geologists on water supplies for war purposes (Meinzer), 323
Ditte, A., on gold, 568
Dolomites, Ohio (review), 259
staining tests (discussion), 420
Doss, B., on melnikovite, 637
Dreaper, W. P., on crystals, 534
Dreyer, R. M., on solutions, 68
Drill cores lacking key beds (stereographic method), Dip and strike from three not parallel (Bucher), 648
Drilling, Structural determinations from diamond (Mertie), 298
Drilling in the United States, Notes on the early history of water-well (Carlston), 119
Druses, tin-tungsten veins, Kiangsi, 451
Dunham, K. C., on brucite, 408, 416
Dunn, J. A., on iron, 12
and Dey, A. K., on magnetite, 664
on vanadium, 180
Dust, coal, pulmonary disease in miners (review), 676

Eckis, R., on sediments, 478
Economic geography (review), 330
Edwards, A. B., with Stillwell, F. L., discussion by, 253
Eggleston, T., on gold, 564
Ehrenberg, H., on pentlandite, 381
on pyrite, 638
on sphalerite, 631
Ekblaw, W. E., foods for defense (review), 258
Electrum, 573
Elliott, W. Y., abstract by, 168
Emerson, B. K., on Dracut area, Mass., 28
Emmens, S. H., on pyrrhotite, 341
Emmons, W. H., and Harrington, G. L., on ground water, 68

England, magnetite, oolitic deposits, 139
Englehardt, E., on fluorescence, 58
Experiments, gold deposition, 570
iron-nickel-sulphur system, 361
scheelite, fluorescence tests, 59
synthesis, brucite, 415
Exsolution, magnetite, 43

Fahey, J. J., *et al.*, on solutions, 68
Fairbanks, E. E., on Dracut area, Mass., 28
Farmin, R., on veins, 525
Faults, Campo Formoso, Brazil, 290
Darwin Hills, Calif., 551
Dracut area, Mass., 33
Little Long Lac area, Ont., 239, 242
Port au Port Peninsula, Newfoundland, 624
terminology (review), 328
United Kingdom (review), 423
Fersmann, A. E., on minerals, 175
Field, R. M., on limestone, 189
Fischer, D. J., on projections, 649
Fisher, D. J., on coal, 110
Flack, W. H., on scheelite, 56
Fleischer, M., *The manganese oxide minerals: A preliminary report*, 269–286
analysis by, 602
and Richmond, W. E., abstract by, 85
Flint, R. F., review by, 72
review by, 162
Florida, water-well drilling history, 135
Fluorescence, Effect of chemical impurities on scheelite (Greenwood), 56
Fluorite, 634
Fluorspar, Newfoundland, St. Lawrence district (abstract), 80
prospecting (abstract), 87
Folds, China, Kiangsi, 437
Little Long Lac area, Ont., 213
Forbes, G., review of book by, 677
Foreman, F., on sulphides, 564
Foster, J. W., and Whitney, J. D., on iron, 11
Foster, M. D., on water, 509
Fractures, Darwin Hills, Calif., 549
Kiangsi, China, 444
France, magnetite, oölitic deposits, 138
Frasche, D. F., on magnetite, 142
Fraser, H. J., *et al.*, abstract by, 83
Freeman, H., on sulphides, 569
Freise, F. W., on chromite, 287
Friedrich, K., on sulphides, 569
Frondel, C., and Heinrich, E. W., on coronadite, 273

Gale, H. S., and Scofield, C. S., on sediments, 507
Galena, 246, 316, 461, 554, 627
leaching at Broken Hill, Australia, 253
Garrels, R. M., discussion by, 65
on galena, 253
on lead-zinc ores, 66
on solutions, 516
on sulphides, 640
Garretty, M. D., and Blanchard, R., discussion of paper by, 253
Gems, emeralds, pegmatite deposits (abstract), 86
Genesis, gold deposition in veins, 512
Genth, F. A., on siegenite, 399
Geochemistry, boron in manganese ores, 389
Fe-Ni-S system, 335
manganese oxide minerals, 269
Geography (review), 330
Geography, economic geography (review), 330
Geological maps—
California, Darwin Hills, 547
chromite, Campo Formoso, Brazil, 288
Dracut area, Mass., 27
Kiangsi, China, 433, 467
Lead and Bellmans Coves, Newfoundland, 642
Ouachita Mtn. region, Ark. and Okla., 96
Steep Rock Lake, Ontario, 5
Geologists and the war (discussion), 667
Geology, Appalachian Valley (review), 255
Bolivia, diamond deposits, 659
Brazil (review), 675
chromite, Campo Formoso, Brazil, 288
Crater Lake, Oregon (review), 72
Darwin Hills, Calif., 546
Dracut area, Mass., 28
Kiangsi, China, 435
limestone deposits, central Pa., 189
Little Long Lac area, Ont., 206
mercury, U. S. (discussion), 149
personnel problems (discussion), 667
Port au Port Peninsula, Newfoundland, 625
structural geology (review), 70
Geomorphology (review), 538
Geophysical prospecting, pitchblende (abstract), 88
George, R. D., review of book by, 538
Georgia, mica (review), 169
water-well drilling history, 135

Gevers, T. W., on minerals, 175
Gilbert, G., on nickel, 28
Gold, California, Middle Butte district (abstract), 83
Gold deposition, The alkali sulphide theory of (Smith), 561
Gold deposition in veins, The mechanism and environment of (White), 512
Gold ores of the Little Long Lac area, Ontario (Armstrong), 204
Goldschmidt, V. M., on boron, 390
on ionic radii, 175
Gonyer, F. A., on tungsten, 279
Goodchild, W. H., on sulphides, 346
Goodspeed, G. E., on quartz, 519
Goudge, M. F., on brucite, 409
Grahamite, Arkansas-Oklahoma, 107
Graphite, 240, 246
United States (abstract), 84
Graton, L. C., on solutions, 563, 645
and McLaughlin, D. H., on pneumatolysis, 54
Gravity survey, Cuba, Camaguey district (abstract), 84
Greenwood, R., *Effect of chemical impurities on scheelite fluorescence,* 56–64
Greig, J. W., on ilmenite, 381
Greisen, 450, 456
Griggs, A. B., and Wells, F. G., abstract by, 83
Ground waters, The nature and significance of certain variations in composition of Los Angeles basin (Morse), 475
Gruner, J. W., on magnetite, 137, 144
on replacement, 9
on sulphides, 565
on sulpho-salts, 343
Guertler, —., and Savelsberg, —., on iron-nickel system, 353
and Tomman, —., on iron-nickel system, 353
Gunnel, E. M., on scheelite, 58

Hägg, G., and Sucksdorff, I., on sulphur, 339
Haidinger, W., on psilomelane, 275
Hallimond, A. F., on magnetite, 139
Hannay, J. B., and Hogarth, J., on solutions, 562
Hanson, —., and Freeman, —., on iron-nickel system, 353
Haraldsen, H., on sulphur, 340
Harcourt, G. A., on calaverite, 578
Harder, E. C., and Chamberlain, R. T., on iron, 13
Harker, A., on brucite, 417
Harlton, B. H., on Ouachita Mtns., Okla.-Ark., 98
Harness, C. L., abstract by, 170
Harper, L., on wells, 134
Hausmannite, 274
Hawley, J. E., on iron, 339
with Colgrove, G. L., and Zurbrigg, H. F., *The Fe-Ni-S system,* 335–388
Headden, W. P., on fluorescence, 58
Helvite, New Mexico, Iron Mtn. (abstract), 82
Hematite, 181, 662
Hendel, C. W., review by, 72
Hendricks, T. A., on carbon, 107
and Laird, W. M., *The manganese deposits of the Turtle Mountains, North Dakota,* 591–602
Hess, F. L., on igneous rocks, 111, 114
Hewett, D. F., on manganese, 599
Hewitt, R. L., on pyrrhotite, 344
Hinds, N. E. A., review of book by, 538
History, copper, Lake Superior district (review), 611
History of water-well drilling in the United States, Notes on the early (Carlston), 119
Hollandite, 274
Honess, C. W., on orthoclase, 97
on quartz, 100
Hornblende, 38
Horwood, H. C., on pentlandite, 347
Hsieh, C. Y., on orogenic history, China, 437
and Cheng, Y. C., on molybdenite, 434
Hsu, K. C., *Tungsten deposits of southern Kiangsi, China,* 431–474
and Ting, I., on Cretaceous, Kiangsi, 436
on tungsten, 432
Huang, T. K., and Hsu, C. K., on orogenic history, China, 437
Huestis, J. L., on water, 131
Hunt, W. F., and Faust, G. T., on brucite, 408
Hydrothermal replacement, iron, Lake Superior, 662
Hydrothermal replacement in deep seated iron deposits of the Lake Superior region (Roberts and Bartley), 1
Hypersthene, 37

Idaho, vanadium, Phosphoria formation (abstract), 87
Illinois, fluorspar, prospecting (abstract), 87

Ilmenite, 44, 179, 215, 230, 246
Imlay, R. W., on igneous activity, 112
Iron, Fe-Ni-S system, 335
  Lake Superior, hydrothermal replacement, 662
  magnetite in bedded deposits, 138
Iron ore deposits of the Lake Superior region, Hydrothermal replacement in deep seated (Roberts and Bartley), 1

Jahns, R. H., abstract by, 82
Jasper, 14
Jensen, E., on iron, 339
Johnson, D., review of book by, 426
Johnston, W. D., Jr., on chromite, 296
  review by, 675
  and de Souza, H. C. A., *Layered or banded chromite at Campo Formoso, Baia, Brazil*, 287–297
Jolliffe, A. W., and Folinsbee, R. E., on scheelite, 56
Jones, C. F., U. S. industry and raw materials (review), 258
Jones, I. W., on lead, 643
Juza, R., and Blitz, W., on sulphur, 340

Kalb, G., and Meyer, E., on bravoite, 399
Kania, J. E. A., on colloids, 645
Kao, P., and Hsu, K. C., on Jurassic, Kiangsi, 436
Kay, G. M., *Chemical lime in central Pennsylvania*, 188–203
  on limestone, 188
Keller, W. D., and Moore, G. E., on staining, 420
Kelley, V. C., on scheelite, 544
Kelley, W. P., on clay minerals, 507
  and Liebig, G. F., Jr., on clay, 508
Kentucky, fluorspar, prospecting (abstract), 87
Keppel, D., abstract by, 86
Kerr, P. F., on pentlandite, 346
  and Armstrong, E., on quartz, 533
Kiangsi, China, Tungsten deposits of (Hsu), 431
Knopf, A., on Inyo Range, Calif., 546
  on iron, 22
  on silver, 544
Knox, —., on mercury, 150
Kremers, H. E., with Quirke, T. T., *Rare element prospecting in pegmatites*, 173–187
Krotov, P. B., on magnetite, 139
Kunz, G. F., and Baskerville, C., on mineral luminescence, 58

Laird, W. M., with Hendricks, T. A., *The manganese deposits of the Turtle Mountains, North Dakota*, 591–602
Lake Superior, iron, hydrothermal replacement, 662
Lake Superior region, Hydrothermal replacement in deep seated iron ore deposits of the (Roberts and Bartley), 1
Landes, K. K., on minerals, 175
Lasky, S. G., on colloids, 644
Laterite, magnetite occurrence in laterite, 142
Laudermilk, J. D., and Woodford, A. O., on sulphides, 638
Lead, Arkansas and Tri-State district, 117
  California, Darwin Hills, 544
  Newfoundland, Port au Port Peninsula, 621
Lee, J. S., on orogenic history, China, 437
  and Chu, S., on Chinese orogenic history, 437
Leith, C. K., *et al.*, on iron, 10
  review of book by, 536
  and Mead, W. J., on magnetite, 142
Lemberg staining method, 413, 420
Lemmon, D. M., on tungsten, 544
Leneček, O., on calcite, 408
Lenher, V., on gold, 565
Leonard, A. G., on lignite, 593
  on Turtle Mtns., N. D., 594
Leonardos, O. H., on chromite, 287
Lepidolite, 182
Leucopyrite, 234
Lignite, North Dakota, Turtle Mtns., 593
Lime in central Pennsylvania, Chemical (Kay), 188
Limestone near Wilkinson, Ontario, Brucite in (Brown), 408
Limestones, Ohio (review), 259
  Ontario, Wilkinson area, 409
  Pennsylvania, chemical lime, 188
Limonite, 48
Linarite, 553
Lindgren, W., on pyrite, 250
  on solutions, 516
  and Davy, W. M., on polydymite, 48
  on pyrrhotite, 346
Lindner, J. L., and Gruner, J. W., on gold, 566
Lindqvist, M., *et al.*, on pentlandite, 343
Lithiophorite, 274
Lithium, 182
  war needs (review), 170

Liversidge, A., on gold, 565
Longwell, C. R., communication by, 667
reviews by, 70, 326, 423
Los Angeles basin ground waters, The nature and significance of certain variations in composition of (Morse), 475
Lovering, T. S., review of book by, 536
Lynch, P. H., *et al.*, on cisterns, 127

McCallie, S .W., on wells, 136
McGuire, W. W., on water, 131
Magmas, 562
ore fluid, 515
Magnetite, 41, 181, 461
Magnetite, Supergene (Brown), 137
Manganese, Arkansas, Batesville area, 116
oxide minerals (abstract), 85
Manganese deposits of the Turtle Mountains, North Dakota (Hendricks and Laird), 591
Manganese ores, On the presence of boron in braunite and (Wasserstein), 389
Manganese oxide minerals (Fleischer and Richmond), 269
Manganite, 275
Maps, California, Inyo County, 545
gold deposits, North America, 513
Lake Superior region, 2
limestone, central Pa., 190
Los Angeles basin, Calif., 480
military uses (review), 329
Mineral Spring, N. Dakota, 596
Port au Port Peninsula, Newfoundland, 623
Marcasite, 48, 463, 634
Marmatite, leaching at Broken Hill, Australia, 253
Mason, B., on bixbyite, 272
on sitaparite, 394
Massachusetts, A nickel deposit near Dracut (Dennen), 25
Maury, M. F., on brine, 122
Mawdsley, J. B., on Abana mines, Quebec, 313
Mead, W. J., on attitude of beds, 300
on dilatancy, 21
Meen, V. B., on quartz, 250
Meinzer, O. E., memorials by, 265, 266
Meissner, C. A., on pyrite, 623
Mellor, J. W., on gold, 568
on iron oxide, 146
Melnikovite, 637
Mendenhall, W. C., on sediments, 477
Meng, H. M., *et al.*, on cassiterite, 434
Mercury, United States (discussion), 149
Mertie, J. B., Jr., *Structural determinations from diamond drilling*, 298–312
on structure determinations, 648
Merwin, H. E., and Larsen, E. S., on immersion media, 631
and Lombard, R. H., on sulphur, 340
Metalliferous deposits), Quartz veins in the Ouachita Mountains of Arkansas and Oklahoma (their relations to structure, metamorphism, and (Miser), 91
Metamorphism, and metalliferous deposits), Quartz veins in the Ouachita Mountains of Arkansas and Oklahoma (their relations to structure (Miser), 91
Darwin Hills, Calif., 548
Ouachita Mtns., Ark.-Okla., 102
Mica, 462
Georgia (review), 169
North Carolina (abstract), 86
Michigan, copper (review), 611
iron, replacement, 14, 17
Microfacies, 325
Micromeritics (review), 610
Mikami, H. M., review by, 163
Miller, B. L., on limestone, 196
Mineral deposits (review), 154
Mineralization, gold, Little Long Lac, Ont., 251
Ouachita Mtns., Ark.-Okla., 114
tin-tungsten, Kiangsi, 455
tungsten, Darwin Hills, Calif., 548
Mineralogy, bravoite, occurrences, 405
brucite, Ontario, 409
chromite, chemical composition (abstract), 85
fluorspar, St. Lawrence district, Newfoundland (abstract), 80
gold ores, California, Middle Butte district (abstract), 84
Little Long Lac, Ont., 213
manganese oxide minerals, 272
manganese oxides (abstract), 85
ores, Normetal mine, Quebec, 314
sulphides, Port au Port Peninsula, Newfoundland, 626
tin-tungsten veins, Kiangsi, 451, 460
tungsten, British Columbia, Red Rose mine (abstract), 81
tungsten ores, Darwin Hills, Calif., 552
Minerals, The manganese oxide (Fleischer and Richmond), 269
New Mexico (review), 163
Minerals and rocks (review), 538

Minerals and world affairs (review), 536
Mining, tungsten, Kiangsi, China, 464
Mining handbook (review), 259
Minnesota, iron, replacement by hematite, 8
Miser, H. D., *Quartz in the Ouachita Mountains of Arkansas and Oklahoma (their relations to structure, metamorphism, and metalliferous deposits)*, 91–118
on dikes, 113
on Ouachita Mtns., Okla.-Ark., 98
on solutions, 116
and Ross, C. S., on peridotite, 111
Mississippi, water-well drilling history, 135
Missouri, calcite-dolomite staining tests, 420
Molybdenite, 461
Monazite, 176
Montes Flores, M. M., on chromite, 287
Moore, E. S., on gold, 252
Morey, G. W., on magma, 562
Morgan, G. D., on Ouachita Mtns., Okla., 98
Morgan, R. E., communication by, 603
Morse, R. R., *The nature and significance of certain variations in composition of Los Angeles basin ground waters*, 475–511
Muelder, H. R., and Delo, D. M., review of book by, 610
Murdoch, A., review of book by, 611

Navier's principle, 423
Neill, J. W., on nickel, 399
Nevin, C. M., review of book by, 70
Newfoundland, Colloform sulphide veins of Port au Port Peninsula (Watson), 621
fluorspar, St. Lawrence district, 80
minerals for war (abstract), 81
Newhouse, W. H., on nickel, 28
on pentlandite, 341
on solutions, 67, 533, 642
New Mexico, brucite, 416
fluorspar, prospecting (abstract), 87
Iron Mtn. (abstract), 82
minerals (review), 163
New South Wales, galena and marmatite, Broken Hill, 253
New York, magnetite, Balmat zinc mine, 143
New Zealand, geomorphology (review), 425
Nickel, Fe-Ni-S system, 335
Missouri, Mine La Motte, 399
Nickel—Continued
nickel-silicate deposits (abstract), 82
Nickel deposit near Dracut, Massachusetts (Dennen), 25
Niessenbaum, —., analysis by, 141
Niggli, P., on melnikovite, 638
on minerals, 175
Normetal mine, Abitibi County, Quebec, Paragenesis of the ore of the (Putman), 313
North, V., analyses by, 599
North Carolina, mica (abstract), 86
North Dakota, The manganese deposits of the Turtle Mountains (Hendricks and Laird), 591
North West Territory, pitchblende prospecting (abstract), 88
Northrup, S. A., review of book by, 163
Novaculite, Arkansas, 102, 106

Oceans, floor of ocean (review), 162
Ogryzlo, S. P., on sulphides, 564
Ohio, dolomites and limestones (review), 259
Oilstone, Arkansas, 106
Oklahoma (their relations to structure, metamorphism, and metalliferous deposits), Quartz veins in the Ouachita Mountains of Arkansas and (Miser), 91
Oliveira, A. I. de, on chromite, 287
and Leonardos, O. H., review of book by, 675
Olivine, 38
Ontario, Brucite in limestone near Wilkinson (Brown), 408
Gold ores of the Little Long Lac area (Armstrong), 204
iron, Steep Rock Lake, 2, 662
magnetite, Frontenac County, 142
nickel ores, Sudbury, 379
Oolites, magnetite-bearing oolites, 138
Oppenheim, V., *Diamonds in the northeastern Bolivian Andes*, 658–661
on diamonds, 660
Ore deposition, chromite, Campo Formoso, Brazil, 295
Ore deposits (review), 154
gold, Little Long Lac area, Ont., 211
gold deposition in veins, 514
ground water and hydrothermal deposits, 65
Ouachita Mtns., Ark.-Okla., 114
tungsten, China, Kiangsi, 439
Ore of the Normetal mine, Abitibi County, Quebec, Paragenesis of the (Putman), 313

Ore shoots, tungsten ores, Darwin Hills, Calif., 555
Oregon, chromiferous sands (abstract), 83
Crater Lake (review), 72
iron, prospecting (abstract), 86
Ores, On the presence of boron in braunite and manganese (Wasserstein), 389
Ores, nickel ores, Sudbury, Ont., 379
Normetal mine, Quebec, 314
Ores of the Little Long Lac area, Ontario, Gold (Armstrong), 204
Origin, brucite, Ontario, 414
Carolina Bays (review), 426
chromite, Campo Formoso, Brazil, 295
diamonds, Bolivia, 660
ground waters, Los Angeles basin, Calif., 500
hydrothermal deposits and ground water, 65
iron, Mesabi Range, Minn., 12
Steep Rock Lake, Ont., 666
manganese, Turtle Mtns., N. Dakota, 598
nickel ores, Dracut, Mass., 51
quartz veins, Ouachita Mtns., Okla.-Ark., 100
sulphides, Port au Port Peninsula, Newfoundland, 643
tungsten ores, Darwin Hills, Calif., 553
tungsten veins, Kiangsi, China, 443
Orthite, 177
Orthoclase, 462
Osborne, F. F., on brucite, 409
Osmond, —., on iron-nickel system, 353
Ouachita Mountains of Arkansas and Oklahoma (their relations to structure, metamorphism, and metalliferous deposits), Quartz veins in the (Miser), 91
Oxidation, iron ores, Lake Superior, 663
Oxide minerals, The manganese (Fleischer and Richmond), 269

Pabst, A., on pyrite, 639
Page, L. R., *et al.*, abstract by, 86
Paine, P., review of book by, 72
Paragenesis, bravoite, 405
copper-nickel-iron sulphides, 346
gold ores, 526
Little Long Lac, Ont., 213, 223, 228, 233, 236, 239, 243, 244
ores, Normetal mine, Quebec, 318
Paragenesis—Continued
sulphides, Spider Pond, Newfoundland, 640
tungsten, China, 463
tungsten ores, Darwin Hills, Calif., 554
Paragenesis of the ore of the Normetal mine, Abitibi County, Quebec (Putman), 313
Partridgeite, 394
Pecora, W. T., abstract by, 82
Pegmatites, Rare element prospecting in (Quirke and Kremers), 173
beryl deposits (abstract), 86
China, Kiangsi, 438, 448
Pélabon, H., on gold, 575
Pellini, G., and Quercigh, E., on gold, 575
Penfield, S. L., on pentlandite, 342
Pennsylvania, Chemical lime in central (Kay), 188
Pentlandite, 41, 47, 341
Peoples, J. W., *et al.*, abstract by, 81
Periclase, 418
Petroleum, Gulf-Southwest production (review), 677
property valuation (review), 72
Petroyson, A., analysis by, 141
Peyton, G., abstract by, 169
Phemister, T. C., on sulphides, 347
Photographs, aerial (review), 678
Photomicrographs—
bravoite, 401
brucite, Ontario, 411
calaverite, 579
magnetite, 144
nickel sulphides, 380
ores, gold, 518
Little Long Lac, Ont., 216
nickel, Dracut, Mass., 40
Normetal mine, Quebec, 315
rocks, Kiangsi, 454
sphalerite, 628
Physiography, maps and photographs (review), 329
New Zealand (review), 425
Physiography (review), 425, 538
Pitchblende, prospecting (abstract), 88
Plagioclase, 36
Plans—
Goodyear prospect, Newfoundland, 624
tungsten ores, Darwin Hills, Calif., 557
Poitevin, E., and Graham, R. P. D., on brucite, 416
Pollock, J., discussion by, 149

Port au Port Peninsula, Newfoundland, Colloform sulphide veins of (Watson), 621
Portmann, W., on pyrite, 638
Powers, S., on Ouachita Mtns., Okla.-Ark., 98
Prospecting, chromite (abstract), 81
fluorspar (abstract), 87
iron, U. S. (abstract), 85
pitchblende, prospecting (abstract), 88
Prospecting in pegmatites, Rare element (Quirke and Kremers), 173
Pseudomorphs, pyrolusite after manganite, 278
Psilomelane, 271, 275, 394
Purdue, A. H., and Miser, H. D., on novaculite, 102
Putman, H. M., *Paragenesis of the ore of the Normetal mine, Abitibi County, Quebec*, 313–322
Putnam, W. C., review of book by, 329
Pyrite, 44, 234, 240, 316. 320, 406, 520, 553, 636, 643
Pyrolusite, 275, 600
Pyrometasomatic deposits, New Mexico, Iron Mtn. (abstract), 82
Pyrrhotite, 41, 45, 316, 339

Quarries, Ohio, limestone and dolomite (review), 259
Quartz, 215, 228, 237, 314, 442, 456, 461, 519
Quartz veins in the Ouachita Mountains of Arkansas and Oklahoma (their relations to structure, metamorphism, and metalliferous deposits) (Miser), 91
Quebec, Paragenesis of the ore of the Normetal mine, Abitibi County (Putman), 313
Quirke, T. T., discussion by, 662
and Kremers, H. E., *Rare element prospecting in pegmatites*, 173–187

Radium, prospecting for pitchblende (abstract), 88
Ramsdell, L. S., on cryptomelane, 274
Ramsdellite, 278
Ranciéite, 278, 594
Ransome, F. L., on alunite, 584
Rare earths, 176
Rare element prospecting in pegmatites (Quirke and Kremers), 173
Rasor, C. A., *Bravoite from a new locality*, 399–407
Realgar, 527
Rectorite, 97
Reed, J. C., and Wells, F. G., on metal deposits, 114
Rego, L. F. de M., on chromite, 287
Renick, B. C., on water, 507
Replacement, iron, Lake Superior, 662
nickel ores, Dracut, Mass., 43, 48
tin-tungsten, Kiangsi, China, 449
tungsten deposits, Darwin Hills, Calif., 549
Replacement in deep seated iron ore deposits of the Lake Superior region, Hydrothermal (Roberts and Bartley), 1
Reviews—
Aerial photographs and their applications (Smith), Digman, 678
America at war (Van Valkenburg), 257
Boom copper (Murdoch), Digman, 610
Chronic pulmonary disease in South Wales coal miners. II. Environmental studies, Winslow, 676
Commodity Year Book, 330
Dolomites and limestones of western Ohio (Stout), Digman, 259
Dynamics of faulting and dyke formation, with applications to Britain (Anderson), Longwell, 423
Economic mineral deposits (Bateman), Singewald, 154
Floor of the ocean (Daly), Flint, 162
Flush production—The epic of oil in the Gulf-Southwest (Forbes), Digman, 677
Fundamentals of economic geography (Bengston and Van Royen), 330
Geologia do Brazil (Oliveira, A. I. de, and Leonardos, O. H.), Johnston, 675
Geology of Crater Lake National Park, Oregon (Williams), Flint, 72
Geology of the Appalachian Valley in Virginia (Butts), Sutton, 255
Geomorphology. The evolution of landscape (Hinds), 538
Handbook for prospectors and operators of small mines (von Bernewitz and Chellson), 259
Landscape (Cotton), Digman, 425
Map interpretation with military applications (Putnam), Bates, 329
Micromeritics, the technology of fine particles (Valle), Switzer, 610
Minerals and rocks (George), 538

Reviews—Continued
Minerals in world affairs (Lovering), Digman, 536
Minerals of New Mexico (Northrup), Mikami, 163
Oil property valuation (Paine), Hendel, 72
Origin of the Carolina Bays (Johnson), Digman, 426
Principles of structural geology (Nevin), Longwell, 70
Structural geology (Billings), Longwell, 326
World minerals and world peace (Leith, Furness, and Lewis), Digman, 536
Years of this land (Muelder and Delo), 610
Rhodizite, 184
Ribbon rock, New Mexico, Iron Mtn. (abstract), 82
Richmond, W. E., with Fleischer, M., *The manganese oxide minerals: A preliminary report*, 269–286
abstract by, 85
on manganese, 270
Ridge, J., on sulphides, 640
Ridland, G. C., abstract by, 88
Roberts, H. M., and Bartley, M. W., *Hydrothermal replacement in deep seated iron ore deposits of the Lake Superior region*, 1–24
discussion of paper by, 662
Roberts, H. S., on pyrrhotite, 47
on sulphur, 340
Rocks and minerals (review), 538
Rogers, A. F., on brucite, 408
Rogers, G. S., on water, 485
Rose, T. K., on gold, 575
Rosenkrans, R. R., on limestone, 191
Ross, C. P., discussion of paper by, 149
on mercury, 68, 69
on sulphides, 584
Ross, C. S., memorial by, 263
on volcanic necks, 111
Rothschild, S., on fluorescence, 57
Royce, S., on iron, 11, 13
Rubey, W. W., abstract by, 87
Rubidium, 182
Ruer, —., and Schulz, —., on iron-nickel system, 353
Rutile, 179

Salt, West Virginia, history of exploitation, 121
Sands, chromite sands, Oregon (abstract), 83
Sandstone, Ouachita Mtns., Ark.-Okla., 105
Savage, W. S., on manganese, 600
Schaller, W. T., on calcite, 644
Scheelite, 231, 460, 552
Scheelite fluorescence, Effect of chemical impurities on (Greenwood), 56
Schenk, —., and Forst, —., on nickel-sulphur system, 356
Schneiderhöhn, H., and Ramdohr, P., on bravoite, 399
on melnikovite, 638
on pyrrhotite, 340
Scholtz, D. L., on pyrrhotite, 45, 340
Schwartz, G. M., on pentlandite, 349
and Ronbeck, A. C., on magnetite, 137
Scientific notes and news, 90, 170, 267, 334, 430, 542, 620, 680
Sections—
iron deposit, Steep Rock Lake, Ont., 6
limestones, Ordovician, Pennsylvania, 191
tungsten deposits, Darwin Hills, Calif., 556
tungsten veins, Tachishan, China, 468
Sediments, Los Angeles basin, Calif., 477
oolites, magnetite-bearing oolites, 138
Serpentine, 413
Serpentinites, U. S. S. R., 140
Shaler, M. K., memorial of, 264
Shales, vanadium shales, Idaho and Wyo. (abstract), 87
Shaw, E. B., U. S. defense (review), 258
Shaw, E. W., and Trowbridge, A. C., on peneplains, 66
Short, M. N., on bravoite, 402
and Shannon, E. V., on bravoite, 399
on nickel, 28
Siderite, 665
U. S. S. R., 141
Siegenite, 406
Silica, 14, 458, 533
Silver, 574
California, Darwin Hills, 544
Middle Butte district (abstract), 83
Singewald, J. T., Jr., abstract by, 87
review by, 154
Smith, F. G., *The alkali sulphide theory of gold deposition*, 561–590
on galena, 644
on iron, 665
on pyrite, 636
on sulphides, 640, 645
Smith, H. T. U., review of book by, 678

Smith, W. S. T., discussion by, 420
Smyth, H. L., and Finlay, J. R., on iron, 9
Snelgrove, A. K., and Howse, C. K., abstract by, 81
Society of Economic Geologists, 76, 167, 263, 541
Sokol, R., on projections, 649
Spector, I. H., on manganese, 599
Spectroscopy, boron determinations, 391
Sphalerite, 215, 230, 246, 314, 627
Spiroff, K., on magnetite, 137
Springs, manganese deposits around springs, 595
Staining, calcite and dolomite, 420
Stannite, 461
Starynkevich-Borneman, I. D., on apatite, 177
Stearn, N. H., on metal deposits, 114
Steck, L. V., *et al.*, on sulphides, 569
Steep Rock Lake iron deposits, Ont., 2
Stein, H. A., on attitude of beds, 300
Stereographic method. Dip and strike from three not parallel drill cores lacking key beds (Bucher), 648
Stevens, R. E., abstract by, 85
analyses by, 294
and Schaller, W. T., on mica, 182
Stevenson, J. S., abstract by, 80
Stibnite, 529
Stillwell, F. L., and Edwards, A. B., discussion by, 253
Stockpiling policy (review), 168
Stout, W., review of bulletin by, 259
Strategic minerals, asbestos (review), 169
stockpile policy (review), 168
Stratigraphy, Appalachian Valley (review), 256
Kiangsi, China, 435
Little Long Lac area, Ont., 206
Ontario, Steep Rock Lake, 3
Pennsylvania, central Pa., 189
Turtle Mtns., N. Dak., 593
Strike from three not parallel drill cores lacking key beds (stereographic method), Dip and (Bucher), 648
Strontium, war needs (review), 170
Structural determinations from diamond drilling (Mertie), 298
Structural geology (review), 70, 326
Structure, metamorphism, and metalliferous deposits), Quartz veins in the Ouachita Mountains of Arkansas and Oklahoma (their relations to (Miser), 91
Structure—Continued
Kiangsi, China, 437
Little Long Lac area, Ont., 210
Sulphide theory of gold deposition, Alkali (Smith), 561
Sulphide veins of Port au Port Peninsula, Newfoundland, Colloform (Watson), 621
Sulphur, Fe-Ni-S system, 335
Supergene magnetite (Brown), 137
Sutton, A. H., review by, 255
Switzer, G., review by, 610
Synthesis, brucite, 415
calaverite, 575
magnetite, 143

Tables—
analyses, boron in manganese ores, 395
chromite, Campo Formoso, Brazil, 294
limestone, Ontario, 410
Pennsylvania, 201
manganese, North Dakota, 599
pentlandite, 342
water, Los Angeles basin, Calif., 485
marcasite, 635
paragenesis, gold ores, Little Long Lac, Ont., 214, 223, 229, 233, 236, 240, 243, 245, 249
nickel ores, Dracut, Mass., 52
tungsten, Kiangsi, 463
pyrrhotite properties, 46
scheelite impurities, 61
stratigraphy, Kiangsi, China, 435
Pennsylvania, central Pa., 189
Steep Rock Lake, Ont., 4
x-ray properties, manganese oxides, 280
Taconite, 13
Taff, J. A., on grahamite, 107
Talc, 39
Talvities, N. A., analyses by, 601
Tantalum, 178
Tanton, T. L., on iron, 4
Tarr, W. A., on melnikovite, 637
Technique, boron determination, 391
calcite and dolomite staining, 420
dip and strike determination method, 648
manganese oxide identification, 279
mineral specimen collecting, 603
Tellurium, solubility, 575
Thompson, D. G., memorial of, 266
Thomson, E., on gold ores, 229
Tien, C. C., on orogenic history, China, 437
et al., on tungsten, 434

Ting, V. K., on orogenic history, China, 437
Titanite, 178
Titanium, 178
Tolman, C., on Normetal mine, Quebec, 313
Tolman, C. F., and Rogers, A. F., on pyrrhotite, 346
on sulphides, 53
Topaz, 457
Tourmaline, 462
Tremolite, 39
Trowbridge, A. C., on peneplains, 66
Tungsten, Argentina (abstract), 87
British Columbia, Red Rose mine (abstract), 80
Tungsten deposits of southern Kiangsi, China (Hsu), 431
Tungsten deposits of the Darwin Hills, Inyo County, California (Wilson), 543
Turtle Mountains, North Dakota, The manganese deposits of the (Hendricks and Laird), 591

Underground water, hydrothermal deposits and ground water, 65
military supplies, 323
Union South Africa, manganese ores, boron content, 389
U. S. S. R., magnetite, Khalilovo, 139
melnikovite, Samara, 637
United Kingdom, dykes and faults (review), 423
United States, Notes on the early history of water-well drilling in the (Carlston), 119
fluorspar prospecting (abstract), 87
graphite (abstract), 84
iron, prospecting (abstract), 85
mercury (discussion), 149
Unmixing, pentlandite from pyrrhotite, 344
Urazov, G. G., and Filin, N. A., on iron-nickel-sulphur system, 350
Utah, iron, prospecting (abstract), 86

Valle, J. M. D., review of book by, 610
Vanadium, 180
Phosphoria formation, Idaho and Wyo. (abstract), 87
Van Alstine, R. E., abstract by, 80
Van der Veen, R. W., on pyrrhotite, 340
on wurtzite, 633
v. Hevesy, G., *et al.*, on columbium, 179
Van Hise, C. R., and Leith, C. K., on replacement, 9
Van Horn, F. R., on fluorescence, 58
Van Valkenburg, S., review of book by, 257
Vaux, G., on psilomelane, 275
Veins, The mechanism and environment of gold deposition in (White) 512
fluorspar, St. Lawrence district, Newfoundland (abstract), 80
gold, Little Long Lac area, Ont., 228, 242
Port au Port Peninsula, Newfoundland, 625
tungsten, China, Kiangsi, 439
Veins in the Ouachita Mountains of Arkansas and Oklahoma (their relations to structure, metamorphism, and metalliferous deposits), Quartz (Miser), 91
Veins of Port au Port Peninsula, Newfoundland, Colloform sulphide (Watson), 621
Verhoogen, J., on sulphides, 640
Violarite, 41
Virginia, Appalachian Valley (review), 255
Vogel, —., and Tonn, —., on system FeS-Ni_3S_2, 345
Vugs, 3, 9
sulphide deposits, Port au Port Peninsula, Newfoundland, 644

Wad, 271
Wailes, B. L. C., on well drilling, 132
Walker, T. L., on pyrrhotite, 341
Wandke, A., and Hoffman, R., on pyrrhotite, 346
War, underground water, military supplies, 323
War and geologists (discussion), 667
Washington, iron, prospecting (abstract), 86
Wasserstein, B., *On the presence of boron in braunite and manganese ores*, 389–398
Watanabe, T., on tellurium, 576
Water, analyses, 600
mine water analysis, Broken Hill, 253
Water-well drilling in the United States, Notes on the early history of (Carlston), 119
Watson, K. De P., *Colloform sulphide veins of Port au Port Peninsula, Newfoundland*, 621–647
Weathering, iron formations, 15
Weeks, W. B., on igneous activity, 112

Well drilling in the United States, Notes on the early history of water (Carlston), 119
West Virginia, salt licks, history of exploitation, 121
White, D., on drilling, 122
White, W. H., *Mechanism and environment of gold deposition in veins*, 512–532
Wilder, F. A., on lignite, 593
Williams, C. P., on nickel, 399
Williams, H., review of monograph by, 72
Williams, H. E., on chromite, 287
Williams, J. S., abstract by, 87
Wilson, L. K., *Tungsten deposits of the Darwin Hills, Inyo County, California*, 543–560
Winslow, C.-E. A., review by, 676
Wisconsin, iron, replacement, 14
Wolframite, 451
Wong, W. H., on metals, 434
on orogenic history, China, 437
World affairs and minerals (review), 536
Wright, C. W., abstract by, 88
on chromite, 287
Wurtzite, 629
Wyoming, vanadium, Phosphoria formation (abstract), 87

X-ray studies, gold minerals, 578
manganese oxides, 276, 279
pyrite, 639

Yorke, P., on gold, 568

Zappfe, C., on manganese, 600
Zinc, Arkansas and Tri-State district, 117
Newfoundland, Port au Port Peninsula, 621
Zircon, 177, 457
Zoning, fluorspar deposit, Newfoundland (abstract), 80
tungsten deposits, Darwin Hills, Calif., 553
Zurbrigg, H. F., with Hawley, J. E., and Colgrove, G. L., *The Fe-Ni-S system*, 335–388
Zviagincev, O. E., and Paulsen, I. A., on gold, 566